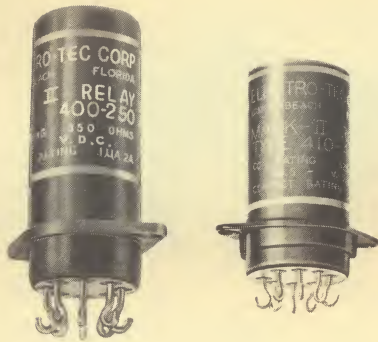




MARK II[®]

SERIES 400 RELAY AND SERIES 410 RELAY (2 PDT)

The Mark II Series 400 and Series 410 2 PDT Relays are miniature, highly reliable Relays which utilize the unique Electro-Tec Corp. "Wedge-Action" Contact Mechanism. This contact design has been well proven in Electro-Tec Corp.'s Mark II 6 PDT Relays. The remarkable characteristic of this contact mechanism is its dual capability of outstanding dry circuit performance as well as the capability for handling contact loads of up to 2 amperes. This allows use of one Relay for both dry circuit and high level applications.

The Wedge Action Contact Mechanism actuated by a simplified solenoid type magnetic motor, provides a multi-pole Relay with extremely rugged environmental characteristics as well as outstanding switching reliability. These Relays are designed to meet or exceed all of the operational and environmental requirements of Mil R 5757/8.

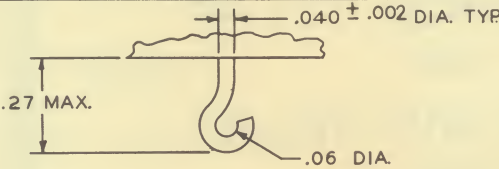
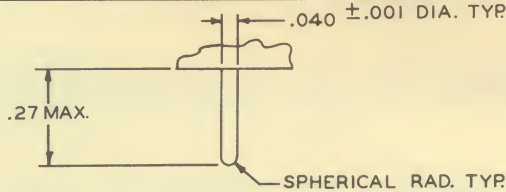
The Series 400 and Series 410 Relays are interchangeable with those of most other manufacturers. They are offered with solder hook or plug in terminals. Standard sockets are available for the plug in terminal Relays.

Electro-Tec Corp.

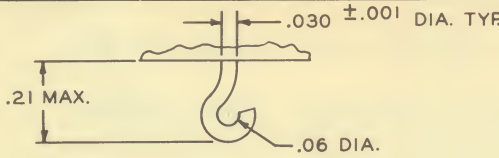
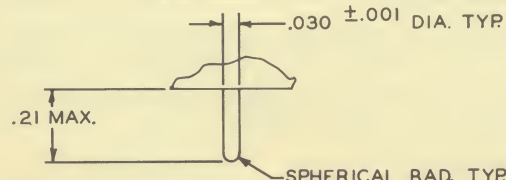
SLIP RINGS • RELAYS • SWITCHES • OPTICS

SELECTION AND ORDERING OF STANDARD RELAYS

SERIES 400

TERMINAL TYPES		COIL TYPES		
TYPE	SYMBOL	NOMINAL RESISTANCE (OHMS) *	NOMINAL OPERATING VOLTAGE (VOLTS DC)	SYMBOL
	01	20	6	01
		80	12	02
		325	26.5	03
		1200	48	04
	02			

SERIES 410

TERMINAL TYPES		COIL TYPES		
TYPE	SYMBOL	NOMINAL RESISTANCE (OHMS) *	NOMINAL OPERATING VOLTAGE (VOLTS DC)	SYMBOL
	03	20	6	05
		80	12	06
		325	26.5	07
		1200	48	08
	04			

* COIL RESISTANCE TOLERANCE $\pm 10\%$

ORDERING PROCEDURE

SERIES NUMBER 400 01 01 01
 MOUNTING STYLE _____
 TERMINAL TYPE _____
 COIL TYPE _____

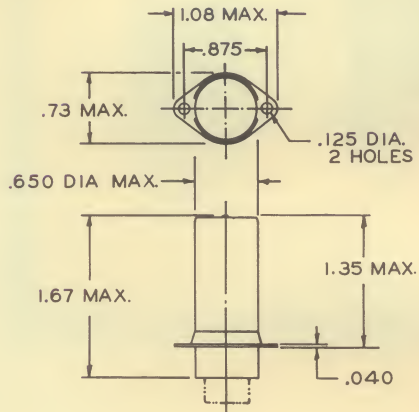
CUSTOM UNITS

A wide range of electrical and mechanical variations, other than those described, can also be supplied as custom units. For information pertaining to your special application, please contact factory or our nearest sales office.

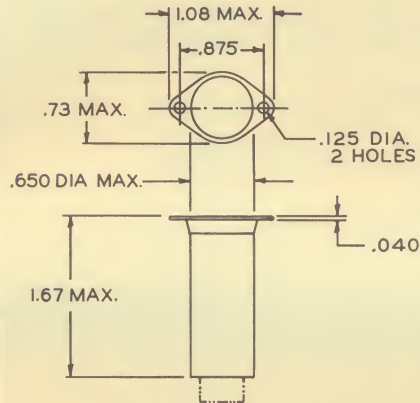
SERIES 400 AND SERIES 410 — STANDARD RELAYS

≡ SERIES 400 ≡

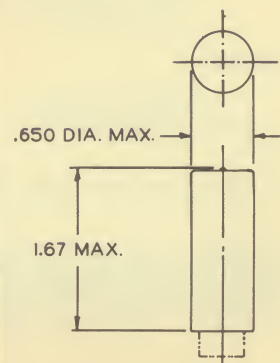
STYLE 01



STYLE 02

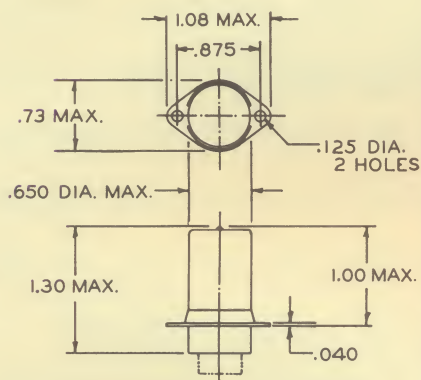


STYLE 03

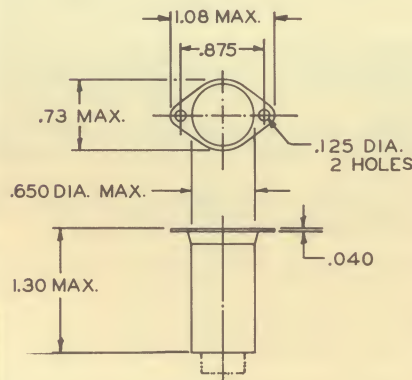


≡ SERIES 410 ≡

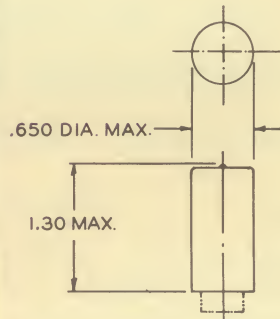
STYLE 04



STYLE 05

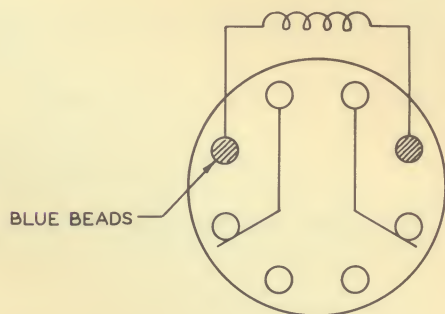


STYLE 06

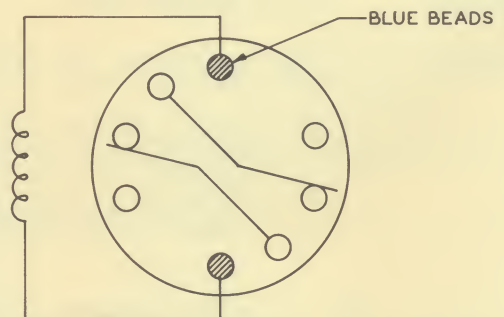


DIMENSIONAL TOLERANCE .XX=±.010 .XXX=±.005

NOTE: OTHER MOUNTING STYLES CAN BE MANUFACTURED UPON REQUEST.



SERIES 400



SERIES 410

WIRING DIAGRAMS—TERMINAL END VIEW—RELAY DE-ENERGIZED

ELECTRICAL CHARACTERISTICS

Series 400 and Series 410 (2 FORM C) 2 PDT

CONTACTS: Electrodeposited gold over fine silver

*Rating: Dry circuit to 2 amperes resistive at 28 VDC.

Life: 100,000 operations minimum at rated load.

Resistance: 0.05 ohms max before life
0.10 ohms max after life

*Bounce: 1 millisecond max.

COILS: (See chart)

RATING: Continuous duty

OPERATE TIME: 10 m. s. max (rated coil voltage, 25°C)

RELEASE TIME: 10 m. s. max

INSULATION RESISTANCE: 1000 megohms min. at 500 VDC

*DIELECTRIC STRENGTH: 1000 VRMS across all test points, except 500 VRMS across open contacts and between coil and case.

* ENVIRONMENTAL CHARACTERISTICS

TEMPERATURE: -65°C to +125°C

VIBRATION: 15 G's from 10 to 2000 cps

SHOCK: 50 G's for 11 m. s. $\pm$ 1. m. s.

HERMETIC SEAL: 3cc/10 years

MECHANICAL CHARACTERISTICS

MOUNTING: (See Chart for Standards.) Special mounting available on request.

TERMINALS: Straight pin, gold plated; or hook-type, flowed tin (See Chart).

FINISH: Flat black, baked on enamel or per customer specification.

MARKING: Manufacturer's identification, wiring diagram, serial number, part number and date code, or per customer's specification.

WEIGHT: 0.09 pounds max

*Note: The following are available on request:

1. Other contact ratings
2. Contact bounce 300 microseconds max
3. Dielectric strength rating of 1000 VRMS across open contacts
4. Other environmental conditions

THE WORLD'S MOST RELIABLE SLIDING CONTACT DEVICES



Electro-Tec Corp.

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Printed in U.S.A.

Now from **Electro-Tec Corp.** a complete series of high-rel

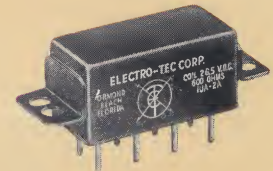
MARK II™ Wedge-Action RELAYS



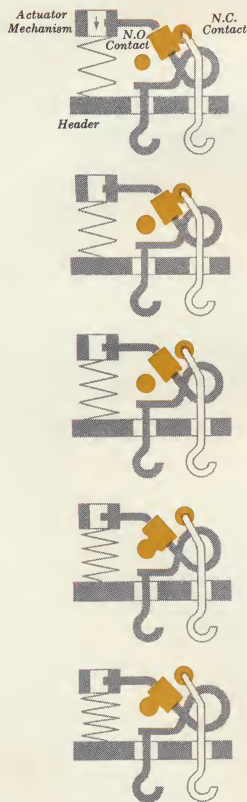
6PDT
Series 085
Series 100
Series 200



2PDT
Series 400



2PDT
MINI-WEDGE®
Series 500



Through eight years of high-rel operation and continuous testing, the Mark II 6PDT Relay has established a dry-circuit confidence level of 90% based on a failure rate of only .001% in 10,000 operations. This proven design concept is now available in a complete line of Mark II Relays that meet or surpass all applicable military specifications. These relays are competitively priced with in-house testing to your high-rel specs. For complete specification and performance data on the world's most reliable dry-circuit to 2 Amp relays, request technical bulletins relative to your relay requirements.

Wedge-Action*

In the Mark II wedge-action design, each moving contact in the switching assembly is mounted between two stationary contacts. The moving contacts are spring members attached to the relay header at one end and to the actuator mechanism at the other end. The obliquely-positioned moving contacts drive into the stationary contacts, developing a positive wedge-wipe action that increases during overtravel on both the normally open and the normally closed contacts. A large amount of contact wipe is developed during each wedge-wipe action, causing self-cleaning of interfacial contacts that ensures long, trouble-free life. This wedge-wipe action occurs during both make and break movements. Wedge-action results in extremely high contact pressures and low contact resistance at all rated current levels. This extremely low contact resistance is maintained throughout the life of the relay, i.e. low level (dry circuit) operation without "random misses" as well as at two amps.

* Patent No. 2,866,046 and others pending.

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